

What is claimed is:

1. A method for modifying rectangular page data to be recorded in a holographic digital data storage system,
5 comprising the steps of:

(a) dividing the rectangular page data into a central region thereof and a peripheral region which surrounds the central region;

(b) rearranging the peripheral region to generate a rearranged peripheral region; and
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(c) merging the central region with the rearranged peripheral region to generate modified page data.

2. The method of claim 1, wherein the modified page data
15 has a shape of circle.

3. The method of claim 1, wherein the modified page data has a shape of n-polygon, n being an integer equal to or larger than 5.
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4. The method of claim 1, further comprising the step of (d) saving the modified page data in a storage medium as modulated page data.

25 5. The method of claim 4, further comprising the steps of:
(e) reading the modulated page data from the storage

medium;

(f) dividing the modulated page data into central modulated page data thereof and peripheral modulated page data which surround the central modulated page data;

5 (g) rearranging the peripheral modulated page data to generate rearranged peripheral modulated page data; and

(h) merging the central modulated page data with the rearranged peripheral modulated page data to generate rectangular modulated page data, wherein the rectangular
10 modulated page data correspond to the rectangular page data.

6. An apparatus for modifying rectangular page data to be recorded in a holographic digital data storage system, comprising:

15 means for dividing the rectangular page data into a central region thereof and a peripheral region which surrounds the central region;

means for rearranging the peripheral region to generate a rearranged peripheral region; and

20 means for merging the central region with the rearranged peripheral region to generate modified page data.

7. The apparatus of claim 6, wherein the modified page data has a shape of circle.

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8. The apparatus of claim 6, wherein the modified page data has a shape of n-polygon, n being an integer equal to or larger than 5.

5 9. The apparatus of claim 6, further comprising a storage medium for saving the modified page data therein as modulated page data.

10. The apparatus of claim 9, further comprising:

10 means for reading the modulated page data from the storage medium;

means for dividing the modulated page data into central modulated page data thereof and peripheral modulated page data which surround the central modulated page data;

15 means for rearranging the peripheral modulated page data to generate rearranged peripheral modulated page data; and

means for merging the central modulated page data with the rearranged peripheral modulated page data to generate
20 rectangular modulated page data, wherein the rectangular modulated page data correspond to the rectangular page data.